U.S.-China Low-Carbon City Action Planning and Technology Solutions Workshop

January 22, 2018 2018年1月22日

Company: Emerson

公司名称: 艾默生

Presenter: Jerry.Dai

演讲嘉宾: 戴俊龙

2016 Emerson At-A-Glance 全球概况

FOUNDED 成立于



WORLDWIDE 全球

74,000 EMPLOYEES 员工

155

MANUFACTURING LOCATIONS 生产地点

CORE BUSINESSS PLATFORMS 核心业务平台

EMERSON AUTOMATION SOLUTIONS 艾默生自动化解决方案

EMERSON COMMERCIAL & RESIDENTIAL SOLUTIONS 艾默生商住解决方案

RECOGNITION 称誉

《财富》美国 500 强 位列

#128

AMONG
FORTUNE 500
OF AMERICA'S
LARGEST
CORPORATIONS

EMERSON EMPLOYEES
WERE AWARDED MORE THAN
艾默生员工 2016 年
在全球获得超过

1,800 PATENTS 项专利 WORLDWIDE IN 2016

THOMSON REUTERS
TOP 100
GLOBAL INNOVATORS
路透社全球创新企业 100 强

\$14.5 BILLION 145亿美元 IN GLOBAL SALES FISCAL YEAR 2016*

- *Excludes results of discontinued operations, repositioning items and prior year divestiture gains.
- *不包括重组项目及上年度剥离业务产生的收益



CONSECUTIVE YEARS OF INCREASED DIVIDENDS 连续每股红利增长

NYSE:

纽约证券交易所代码:

EMR

艾默生中国

At-A-Glance 概览

Doing business in China since 在中国开展业务 始于

1970s

since 2002 LARGEST MARKET After the US 自 2002 财年成为 仅次于美国的第 二大市场

~10,000 Employees 员工





Headquarter Shanghai 上海总部



Automation Solutions Shanghai 自动化解决方案上海



Commercial & Residential Solutions Suzhou 商住解决方案苏州

核心业务平台 Core technology and products

我们专注于工业、商业及住宅市场,应对世界上最复杂、最关键的挑战。We focus on the most critical challenges in industry, commercial and residential market

艾默生自动化解决方案 Emerson's automation solutions

- ·最大化善用世界的宝贵资源 Best utilization of valuable resources in the world
- ·促进各国以负责任的方式提升经济水平
 Encourage countries to increase economic
 level responsibly
- ·推动关键行业的发展和安全 Promote key industries' development and safety
- ·促进日常生活的支柱产业发展 Promote industries that support everyday life.

艾默生商住解决方案 Emerson's commercial building solutions

- ·保障居民舒适和健康 Ensure residents' comfort and health
- ·保障食品质量和可持续性 Ensure food quality and sustainability
- · 改善能效和保护环境 Improve energy efficiency and environment
- ·建立可持续性的基础设施 Build sustainable infrastructure
- · 在美国 The Helix 创新中心持续创新 Continued innovation in U.S. "The Helix" innovation center

艾默生: 服务于各大行业 Emerson: serve different industries

艾默生自动化解决方案 Emerson's automation solutions

艾默生商住解决方案 Emerson' commercial building solutions































低碳 Low carbon

艾默生专注于改善全世界人们的生活质量,同时降低我们对环境的影响。Emerson aims to improve life quality across the world while reducing environmental impacts



能效 Energy efficiency

艾默生正在帮助客户利用工业物联网,将能源成本降低 5% - 15%,从而减少降低环境影响,节省客户成本。Emerson works with clients through industry IoT device to reduce energy cost by 5-15%, which reduces environmental impact and reduce customers' cost

研发协作 Innovation

我们行业一流的 Helix 创新中心 致力于全球暖通空调和制冷行 业的领先研究。

Helix research center is a world class research institution on HVAC industry

可持续报告 Carbon reporting

自 2006 年以来,艾默生一直 主动参加碳信息披露计划。

Emerson participates in carbon reporting since 2006

可靠制冷 Reliable cooling

2015年,艾默生推出全系列压缩机和控制器,采用的制冷剂将全球变暖效应减少 50% 以上。

In 2015, Emerson's new compressor and control product line utilizes a new type of coolant that can reduce its GHG impact by 50%.

低碳应用: 食物垃圾处理 Low carbon application: waste food management











减少收拾污秽的食物垃圾并倒 入厨房脚踏式垃圾桶的烦恼, 您只需打开冷水龙头,打开开 关并将食物垃圾倒入水池。

减少住宅中 的虫子和异 味。 清洁和食品 准备工作都 可加快。 InSinkErator食物垃圾处理器外形紧凑且豪不显眼地安装在水槽下。

使用它,可以实现垃圾分类,源头减量,干湿分离的目标。使用它您可以为环境做出积极贡献。它不仅可以减少送到填埋场的垃圾量,研磨后冲走的垃圾颗粒还可以在污水处理厂制成土壤改良剂而得到再循环利用*。

Cleaning:

Instead of dumping kitchen waste to garbage, you can dump food into the sink

Hygiene:

Reduce Speed up buildings' cleaning and bugs and food unpleasant preparation odor

Convenience: Practical:

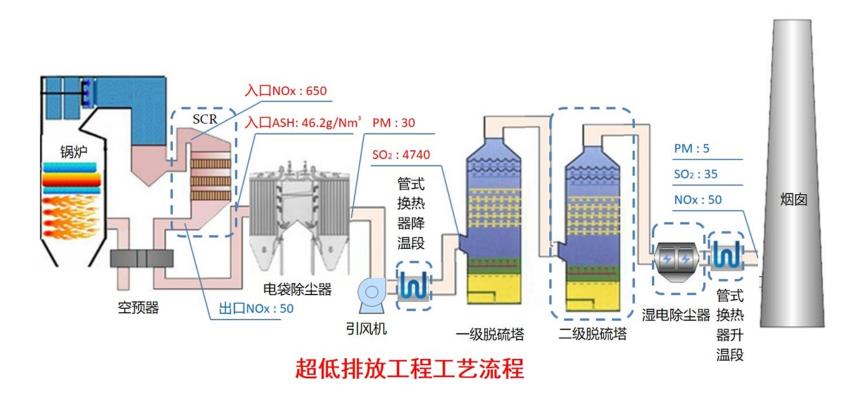
Install waste food management system InSinkErator under the sink

社会责任

Environmental benefit:

Helps to reduce landfill and grained food waste can be flooded with water to enhance soil quality

低碳应用:燃煤机组超低排放 Low Carbon Application: low emission coal fire plants

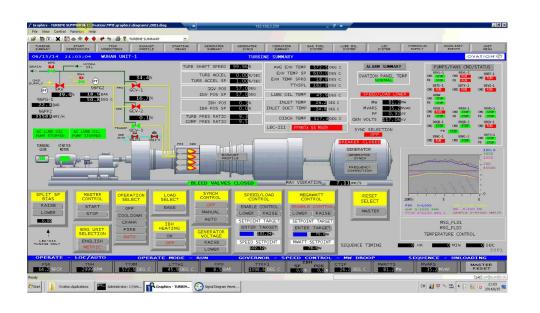


国内35%的燃煤机组采用艾默生Ovation控制系统。这些燃煤机组80%已经完成超低排放的系统改造,煤电机组二氧化碳排放强度下降到865克/千瓦时左右。

Procedure:

About 35% of the coal fire plants use Emerson's Ovation control system. Those plants have completed 80% of the system, and reduce CO2 emission to 865 g/kWh

低碳应用:燃机改造 Low carbon application: engine renovation



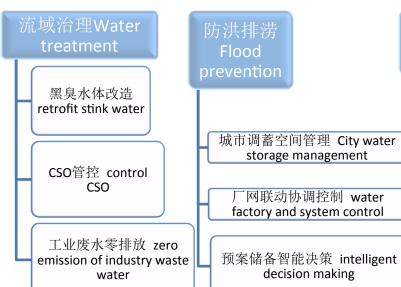
国内某9E机组低氮燃烧改造效能检验 An addition of low NOx control component of a 9E combustion engine in China

Summary at Base Load:

	•		
Date	-	6/15/2014	
Max Compr Inlet temp	°F	87.58	
Baseload split	PrimarySplit	85.00	L
Emis NOx 15%O2	ppm	6.70	
Emis CO 15%O2	ppm	1.70	
Emis O2	%	15.20	
LBO Mag dynamics	max, psi pk-pk	0.50	
CT Mag dynamics	max, psi pk-pk	0.50	
HT Mag dynamics	max, psi pk-pk	0.90	
Exhaust temp spread	°C	20.08	Γ

65%-100%负荷范围内CO排放最大不超过25ppm Not go over 25ppm of CO within 65% to 100% of load

低碳应用:海绵城市Low carbon application: sponge city



中水节能
energy and
water saving

中水/径流回用 Grey water
recycling

无人值守/设备管理 unmanned
equipment management

「级精细化控制 Detailed
planning of factories

渗漏诊断 leak detection

根据气象预报智能化管理深隧、调蓄池的吸纳 空间,削减降雨径流避免内涝发生

污水厂快速响应进水负荷及过程曝气量、加药 量等

渗漏监测, 稳压供水

综合评估CSO与水质因素制定控制方案

设备预诊断、维护,提高效率

先进的控制算法降低能耗

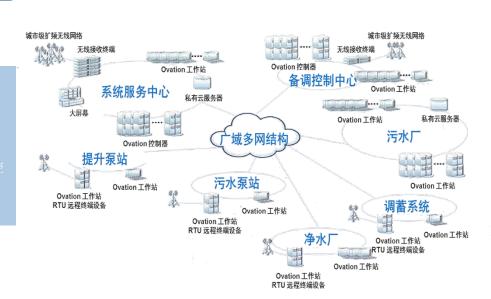
各类系统的集成:统一平台:综合管理

艾默生水处理自动化解决方案

Emerson's water treatment solutions

SmartProcess能效优化 、AMS预见性维护及渗漏监测、多网搭制区域级无人值守

SmartProcess energy efficiency optimization, AMS maintenance





EMERSON